CLAIMS

1 – A method for increasing the capacity of signal transmission systems comprising N_T users, a single-piece receiver receiving the mixture of signals originating from the N_T users, characterized in that it includes at least the following steps :

a) determining a qualitative information Info(Qs) of the symbols estimated for each of the N_T users,

b) transmitting this information Info(Qs) to a processing block receiving an a priori information and designed to generate a quality information, Info(Qbs), on the bits forming the symbols,

c) transmitting the Info(Qbs) to a decoding step to obtain a qualitative information on the encoded bits and Info(Qbu) on the useful bits.

2 – The method as claimed in claim 1, characterized in that the step a) is performed using an MAP (Maximum a Posteriori) detector.

3 – The method as claimed in claim 1, characterized in that the steps a) to c) are repeated until the qualitative information is fairly constant.

4 – The use of the method as claimed in one of the preceding claims, for transmitters using one of the following modulation schemes : BPSK, QPSK, OFDM.